



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/676,479

10/01/2003

Kenneth C. Shuey

ABME-0806/B970162

7529

23377 7590 07/29/2009

WOODCOCK WASHBURN LLP  
CIRA CENTRE, 12TH FLOOR  
2929 ARCH STREET  
PHILADELPHIA, PA 19104-2891

EXAMINER

BORISSOV, IGOR N

ART UNIT

PAPER NUMBER

3628

MAIL DATE

DELIVERY MODE

07/29/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## **DETAILED ACTION**

### ***Response to Amendment***

Amendment received on 04/14/2009 is acknowledged and entered. Claims 1-16 and 18 have been canceled. Claim 17 has been amended. Claims 17 and 19-22 are currently pending in the application.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17 and 19-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The system claim 17 is vague and indefinite; it is not clear which part of the claim describes the known elements of the invention, including a preamble, and which part recites the new and inventive features of the Applicant's invention. For example, claim 17 recites:

“17. (Previously presented) A server interfaced to a data network of an automated meter reading system, the automated meter reading system having a plurality of utility meters for measuring and recording metered data, a plurality of nodes, each node communicating with and associated with a number of designated meters to read the meter data, a plurality of gateways, each gateway communicating with and associated with a number of the nodes to receive the meter data, and the data network interfaced to communicate with the plurality of gateways, ...”

It is not clear whether the automated meter reading system having a plurality of utility meters is a part of the invention, or merely identifies an application field of the invention or known elements. If the invention is comprised of a single server, it may trigger Claim Rejections under 35 U.S.C. 112 first paragraph (single means claims).

Art Unit: 3628

Furthermore, the claim, as a whole, appears to recite an intended use of the server, and does not provide any indication that said server is configured for performing the recited functionality.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 17 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. (US 5,963,146) in view of Suzuki et al. (US 5,892,912).**

Johnson et al. (Johnson) teaches an automated meter reading system comprising a plurality of utility meters for measuring and recording metered data; a plurality of nodes (cell nodes), each node communicating with a number of designated meters to read the meter data; a plurality of gateways (intermediate data terminal), each gateway communicating with a number of the nodes to receive the meter data; a data network (WAN) interfaced to communicate with the plurality of gateways, and a host server (Central Data Terminal) interfaced with the data network to receive the meter data read from the gateways, wherein said meters are grouped in a plurality of cells, each cell having a node; and wherein a plurality of nodes are grouped to be assigned to a plurality of gateways; and wherein said host server maintaining a topology database, wherein said topology database comprising:

first electronic data representative of meter assignments to at least one node;  
second electronic data electronically keyed to said first electronic data and representative of node assignments to at least one gateway;

third electronic data electronically keyed to the second electronic data for grouping together a plurality of nodes to define groups of noninterfering nodes based at least in part on the node assignments; and

forth electronic data electronically keyed to the second electronic data for grouping together a plurality of gateways to define sets of noninterfering gateways, wherein the recited functionalities being implemented by Johnson computer system (Figs. 1, 6, 12, 13; C. 3, L. 45-65; C. 5, L. 12-29), and

wherein the network service modules 110 are permitted to transmit only during a predetermined time period (sequentially) so that an open time period is available for communication on the same frequency between the intermediate data terminal 114 and the remote cell node 112 without any interference from the remote cell nodes 112 (To this end the examiner point out that the claim requires only that “each group of noninterfering nodes comprises a group in which (a) no inbound transmission from any node in the group interferes with any inbound transmission from any other node in the group, and (b) no inbound transmission from any meter associated with any node in the group interferes with any inbound transmission from any meter associated with any other node in the group”, and does not recite any functionality responsible for this effect. Other words, the claim require only that communications between the meters is conducted without interferences, without providing any details how this effect is achieved. Same reasoning applied to “gateway” feature).

Furthermore, Johnson teaches: “This level of communication can be carried out using a polling system from the intermediate data terminals 114 to each of the remote cell nodes 112 in turn preferably including a directional transmission system at the intermediate data terminal (C. 18, L. 13-20; C. 7, L. 44-45).

Johnson does not specifically teach the specifics of data structure defining association of groups of nodes, including the topology of gateways, nodes, meters and their respective interconnections and/or interfaces in a topology database.

Suzuki et al. (Suzuki) teaches an automated system for managing a plurality of nodes on a network, comprising a plurality of network nodes (meters) communicating with a designated switching hub (node), a plurality of switching hubs communicating

Art Unit: 3628

with servers over the WAN, wherein said servers provide resources to the individual switching hubs. In use, the VLAN server stores MAC addresses of the nodes connected to the ports of the individual switching hubs, and VLAN identifiers specifying groups to which the respective nodes etc. belong. The file server stores document or data files. Each of the servers also is a node having a communication function, like the other nodes, and has a MAC address associated therewith and a VLAN identifier specifying a groups to which it belongs (C. 2, L. 47-65; C. 4, L. 55-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Johnson to include storing information related to the topology of gateways, nodes, meters and their respective interconnections and/or interfaces in a topology database, and grouping together said gateways in accordance with said topology information, as disclosed in Suzuki, because it would advantageously allow to facilitate the management process of the network, thereby enhancing the efficiency of the system performance. Furthermore, in this case, each of the elements of the cited references combined by the Examiner performs the same function when combined as it does in the prior art. Thus, such a combination would have yielded predictable results. See *Sakraida*, 425 U.S. at 282, 189 USPQ at 453. Therefore, Supreme Court Decision in *KSR International Co. v. Teleflex Inc.* (KSR, 82 USPQ2d at 1396) forecloses the argument that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See the recent Board decision *Ex arte Smith*, --USPQ2d--, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007).

Claims 19-21, same reasoning as applied to claim 17.

### ***Response to Arguments***

Applicant's arguments filed 04/14/2009 have been fully considered but they are not persuasive.

In response to applicant's argument that the amendment to claim 17 obviates Claim Rejections under 35 U.S.C. 112, it is noted that claim 17 is vague and indefinite. Specifically, it is not clear which part of the claim describes the known elements of the invention, including a preamble, and which part recites the new and inventive features of the Applicant's invention.

In response to applicant's argument that Johnson achieves the reduction in signal interference in different way than in Applicant's invention, and that Johnson does not disclose storing information related to the topology of gateways, nodes, meters and their respective interconnections and/or interfaces in a topology database, and grouping together said gateways in accordance with said topology information, the examiner points out that Johnson discloses an automated meter reading system comprising a plurality of utility meters for measuring and recording metered data; a plurality of nodes (cell nodes), each node communicating with a number of designated meters to read the meter data; a plurality of gateways (intermediate data terminal), each gateway communicating with a number of the nodes to receive the meter data; a data network (WAN) interfaced to communicate with the plurality of gateways, and a host server (Central Data Terminal) interfaced with the data network to receive the meter data read from the gateways, wherein said meters are grouped in a plurality of cells, each cell having a node; and wherein a plurality of nodes are grouped to be assigned to a plurality of gateways; and wherein said host server maintaining a topology database, comprising data representative of: meter assignments to at least one node; node assignments to at least one gateway; data for grouping together a plurality of nodes to define groups of noninterfering nodes based at least in part on the node assignments; data for grouping together a plurality of gateways to define sets of noninterfering gateways, wherein said functionalities being implemented by Johnson computer system (See the discussion above). Furthermore, Johnson explicitly addresses the interfering problem and provides a solution to avoid said problem by sequentially/systematically polling each node to avoid any interference from the remote cell nodes (C. 18, L. 13-20; C. 7, L. 44-45). As per the specifics of data structure defining association of groups of

Art Unit: 3628

nodes, Suzuki was applied for this feature. To this end it is noted that applicant's arguments are directed against the references individually; but one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Igor Borissov whose telephone number is 571-272-6801. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For



Art Unit: 3628

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Igor N. Borissov/

Primary Examiner, Art Unit 3628

07/26/2009